

## INCREASING ENGAGEMENT IN DAILY ACTIVITIES BY OLDER ADULTS WITH DEMENTIA

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This study analyzed the effects of nursing assistants' use of prompts and praise to increase the engagement of older adults with dementia in daily living activities. The multiple baseline design across morning and afternoon work shifts showed consistent increases in engagement by each of the 5 residents during the intervention. These results suggest that increasing prompts and praise by nursing assistants may, in turn, increase the rate of engagement of older adults with dementia.

DESCRIPTORS: older adults, dementia, engagement, prompts, reinforcement

As the general population advances in age, institutional care facilities will remain necessary alternatives for some elders, particularly those with dementia. Unfortunately, residents of institutional care facilities typically live sedentary lives. For example, Burgio et al. (1994) conducted over 12 hr of observations with 11 nursing home residents and reported that the residents engaged in no activity during 87% of all observations. Interventions designed to increase residents' engagement have been typically confined to specific group activity periods (e.g., Conroy, Fincham, & Agard-Evans, 1988). This study was designed to assess the impact of frequent verbal prompts and praise on older adults' engagement in a range of daily activities.

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We thank the staff, residents, and family members of Sterling House Assisted Living Facility for their assistance in the conduct of this research.

This study was supported in part by grants from the University of Kansas Graduate Research Fund (3037-0003) and the Alzheimer's Disease and Related Disorders Association, Inc. (RG1-96-011). This manuscript is based on the first author's master's thesis submitted to the Department of Human Development and Family Life at the University of Kansas.

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## METHOD

### *Setting and Participants*

The study was conducted in a special care unit of an assisted living facility that was designed to serve up to seven older adults with dementia and was staffed by a certified nursing assistant (CNA). Five residents living in the unit participated in the study. The residents ranged in age from 85 to 95 ( $M = 88$ ), had lived in the facility for 1 to 23 months ( $M = 10$ ), and experienced dementia as evidenced by scores on the Mini-Mental State Exam (Folstein, Folstein, & McHugh, 1975) that ranged from 4 to 19 ( $M = 12$ ). This test is a widely used cognitive screening instrument on which scores of 11 to 20 indicate moderate impairment and 10 or lower indicate severe cognitive impairment.

### *Residents' Engagement and Observation Procedure*

The experimental design used in this study was a multiple baseline across CNA work shifts. The primary dependent variable was residents' engagement and was classified into three categories: (a) appropriate engagement, (b) inappropriate engagement, and (c) no engagement. Appropriate engagement was scored when a resident participated in

an activity that was useful in maintaining independence, quality of life, or physical or mental health (e.g., setting the table, cooking, playing with the dog, drawing or painting). Inappropriate engagement was scored when a resident was involved in maladaptive behavior (e.g., aggression, elopement, repetitive inappropriate vocalizations). No engagement was scored when a resident did not participate in any form of activity (e.g., sitting alone, sleeping, staring blankly). In addition, each time a resident was scored as appropriately engaged, the researcher made note of the activity. The number of different activities in which residents were engaged was computed by counting the number of unique (nonrepeated) activities that occurred during each observation.

Observation sessions lasted approximately 50 min and were conducted twice per week for 20 weeks at differing times during both the morning (9:00 a.m. to 3:00 p.m.) and afternoon (3:00 p.m. to 6:00 p.m.) shifts. Follow-up observations were conducted once every 2 weeks following the intervention. During all observation sessions, each resident's engagement was observed sequentially using a time-sampling procedure. Residents were watched, in turn, for 3 s, during which time the type of engagement was scored. If appropriate engagement and inappropriate engagement occurred simultaneously, inappropriate engagement was scored. One exception to the time-sampling procedure occurred if a resident was initially observed as not engaged. In that case, observers watched the resident until engagement occurred or 30 s elapsed, whichever came first. This procedure ensured that nonengagement was not overreported. After all 5 residents had been observed once, the sequence was repeated 15 times. The percentage of time samples in which appropriate engagement occurred was computed by dividing the sum of the time samples containing appropriate engagement

by the total number of time samples, multiplied by 100%.

A second observer independently scored resident engagement and activities at least once during each condition for both work shifts (12% of all sessions). Interobserver agreement for resident engagement was calculated by dividing agreements by the sum of agreements plus disagreements and multiplying by 100%. Mean interobserver agreement on engagement was 94% (range, 89% to 100%). Interobserver agreement on the number of different activities that residents engaged in was calculated by dividing the smaller number of events recorded by one observer by the larger number of events recorded by the other observer and multiplying by 100%. Interobserver agreement averaged 91% (range, 78% to 100%) for number of different activities.

### *Intervention*

CNAs participated in a 30-min training session on implementation of a resident check-in procedure prior to her work shift on the 1st day of the treatment condition. During the training, the CNAs were taught the following check-in techniques: (a) make personal contact with each resident at least every 15 min; (b) provide behavior-specific praise to residents for appropriate engagement; and (c) offer a choice of at least two activities, if a resident is not engaged. Immediately following the training, the check-in procedure was modeled by the trainer for 30 min during the CNA's regular work shift. The CNA then was observed during the next 30 min and received immediate performance feedback. One additional feedback session was conducted during the CNA's next work shift. The CNAs received written feedback at the end of each observation session during the intervention. This feedback consisted of three brief positive statements regarding procedures the CNAs excelled in (e.g., providing choices, redirecting, etc.)

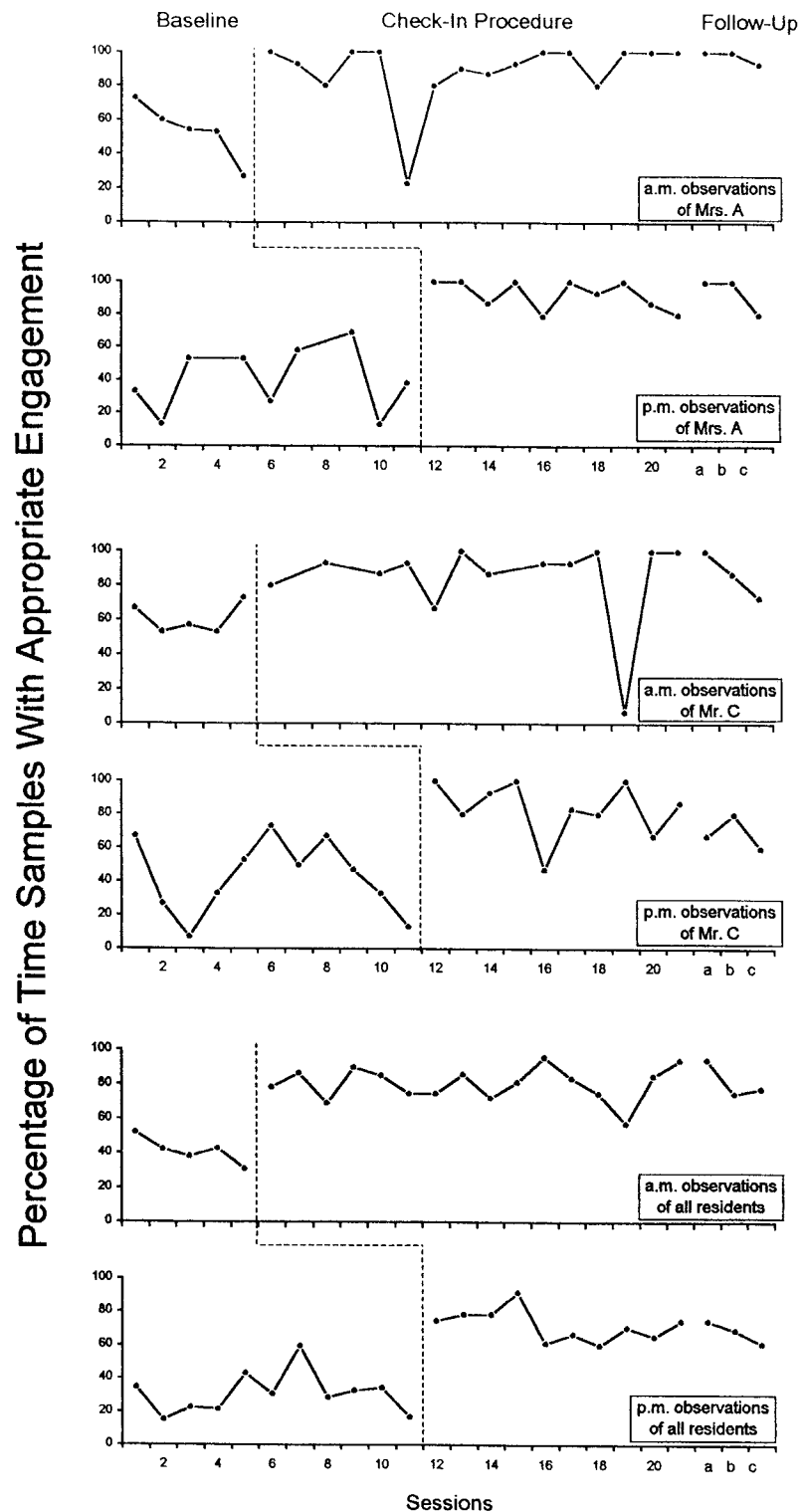


Figure 1. The percentage of time samples with appropriate engagement for Mrs. A and Mr. C, and mean aggregate data for all 5 residents. The dotted line indicates when each CNA was trained to conduct the check-in procedure.

and one suggestion for improvement. After the intervention observations and before the follow-up condition, the researchers conducted another 30-min in-service session. Both CNAs attended this session, along with 20 other employees of the facility. It was designed to describe the results of the research project and to teach staff members who may occasionally work in the unit how to use the check-in procedure.

## RESULTS AND DISCUSSION

Figure 1 shows the appropriate engagement in activities by 2 residents (Mrs. A and Mr. C) and mean aggregate data of appropriate engagement for all 5 resident participants. During baseline for the morning observations, the mean percentage of time samples in which Mrs. A, Mr. C, and all residents were appropriately engaged was 53%, 61%, and 41%, respectively. During the check-in condition, appropriate engagement in activities increased to 89%, 85%, and 81%, respectively, and was maintained at 98%, 87%, and 83%, respectively, during follow-up. For the afternoon observations, the baseline mean for appropriate engagement of Mrs. A, Mr. C, and all residents was 40%, 43%, and 31%, respectively. During the check-in condition, appropriate engagement in activities increased to 93%, 84%, and 72%, respectively, and was maintained at 93%, 69%, and 68%, respectively, during follow-up. Inappropriate engagement was observed during less than 1% of the baseline sessions for all residents and was never observed during the check-in or follow-up conditions.

The number and variety of activities in which residents engaged changed markedly from baseline to follow-up. Residents were

observed engaging in only seven different basic living activities during baseline (e.g., conversing, eating, exercising, and reading). During the check-in condition residents engaged in those seven activities along with 20 additional activities (e.g., planting flowers, feeding and caring for a bird and dog, setting the table, playing the organ, and making crafts).

The current study extends the literature by suggesting that staff education and management can increase the engagement of older adults with dementia. Limitations of this study include the small percentage of inter-observer agreement checks, the absence of data on staff behavior (e.g., frequency of check-ins, praise, choices, and redirection), and the possibility of staff reactivity to observer presence. Future research should include staff performance measures to evaluate the impact of the training package and to evaluate the relationship between treatment integrity and participants' behavior.

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*Received July 16, 1998*

*Initial editorial decision September 8, 1998*

*Final acceptance October 7, 1998*

*Action Editor, Timothy R. Vollmer*